

CLAIMS

1. Method for routing a packet from a first slave (A) to a second slave (B) within
 5 a Bluetooth network (301), the network including multiple nodes, whereof one
 node constitutes a master (M) and at least two nodes constitute slaves, a first
 slave (A) respective a second slave (B), the slaves each having an address,
 stored in a database which is available for the master (M), the packet being a
 Baseband packet having a header, and the master (M) controlling all the
 10 communication in the network, the method including the steps of:

obtaining (401) the address information of the second slave (B) from the master
 (M);

noting (402) the address information of the second slave (B) in the header of
 the Baseband packet;

15 *transmitting* (403) the Baseband packet from the first slave (A) to the master
 (M);

analysing (404) the address information of the second slave (B) in the header of
 the Baseband packet; and

20 *forwarding* (405) the Baseband packet from the master (M) to the second slave
 (B) according to the address information.

2. Method according to the previous claim, wherein the address information
 constitutes an AM_ADDR.

- 25 3. Method according to any of the previous claims wherein the Baseband packet
 includes payload Cyclic Redundancy Check (CRC) and the payload CRC is not
 checked in the master (M) when the Baseband packet was forwarded, the
 method including the further step to be taken by the second slave (B) after the
 forwarding step;

30 *checking* the payload CRC.

4. Method according to the previous claim, including the further step to be taken if the checking results in that an error is detected:

requesting a retransmission of the concerned Baseband packet from the master (M) to the second slave (B).

5. Method according to the previous claim, wherein the forwarded Baseband packet is cached in a memory within the master (M), including the further step to be taken by the master (M), after receiving the request of retransmission:

checking the payload CRC in the cached Baseband packet.

6. Method according to the previous claim, including the further step to be taken by the master (M), if the payload CRC results in no error found:

retransmitting the Baseband packet to second slave (B).

7. Method according to claim 5, including the further step to be taken by the master (M), if the payload CRC results in error detected:

requesting retransmission of the Baseband packet from the first slave (A).

8. Method according to any of the claims 1 or 2, wherein the Baseband packet includes payload CRC the method including the further steps; to be taken by the master (M);

checking the payload CRC in the master (M) before the forwarding step; and

checking the payload CRC in the second slave (B) after the forwarding step.

9. Method according to the previous claim, including the further step to be taken after checking the payload CRC in the second slave (B) and if the checking results in that an error is detected;

5 *requesting* a retransmission of the concerned Baseband packet from the master (M) to the second slave (B).

10. Method according to the previous claim, including the further step to be taken by the master (M), if after a number of unsuccessful retransmissions attempts and the master (M) intends to discard the Baseband packet:

10 *passing* a notification of delivery failure upward through the protocol stack within the master (M), to a layer higher than the Baseband layer.

11. Method according to the previous claim, including the further step of:

15 *sending* a message from the higher layer of the master (M) to the peer entity in the first slave (A), the message including an indication of the delivery failure.

12. Method according to the previous claim, wherein the message further includes information of the last packet successfully delivered.

20 13. Method according to claim 11, wherein the message further includes information of the first packet unsuccessfully delivered.

14. Method according to any of the claims 1 or 2, including the step of:

25 *including* the address information of the first slave in the Baseband packet header.

15. Method according to any of the claims 1 or 2, including the step of:

including the address information of the first slave in a NAL packet header.

16. A computer program product directly loadable into the internal memory of a digital computer within a node being a member of a Bluetooth communication network, including the software code portions for performing the steps of any of the claims 1-15, when said product is run on a computer.

17. A computer program product stored on a computer usable medium, including readable program for causing a computer, within a node being a member of a Bluetooth communication network, to control an execution of the steps of any of the claims 1-15.

18. A Bluetooth network (301) including multiple nodes (A, B, M and S), whereof one node constitutes a master (M) and at least two nodes constitute slaves, a first slave (A) and a second slave (B), the slaves each having an address, the packet being a Baseband packet having a header, and the master (M) controlling all the communication in the network, **characterised in that**

the respective address of the slaves (A, B and S) within the network are stored in a database available for the master (M),

the first slave (A) having means for obtaining the address information of the second slave (B) from the master (M),

the first slave (A) having means for noting the address information of the second slave (B) in the header of the Baseband packet,

the first slave (A) having means for transmitting the Baseband packet to the master (M),

the master (M) having means for analysing the address information of the second slave (B) in the header of the Baseband packet, and

the master (M) having means for forwarding the Baseband packet to the second slave (B) according to the address.

19. Bluetooth network (301) according to the previous claim, **characterised in** that the address constitutes of an AM_ADDR.

20. Bluetooth network (301) according to claim 18, **characterised** by, the master (M) having means for passing a notification of delivery failure upward through the protocol stack within the master (M), to a layer higher than the Baseband layer.

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21. Bluetooth network (301) according to the previous claim, **characterised** by, the layer higher than the Baseband layer of the master (M) having means for sending a message to the peer entity in the first slave (A), the message including an indication of the delivery failure.

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22. Bluetooth network (301) according to claim 18, **characterised** by the master (M) having a memory for caching the Baseband packet to be forwarded.

23. Bluetooth network (301) according to claim 18, **characterised** by the first slave (A) having means for including its address in the Baseband packet header.

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24. Bluetooth network (301) according to claim 18, **characterised** by the first slave (A) having means for including its address in the NAL packet header.